In the Claims:

Please amend the claims as follows.

1. (Original) A process for the preparation of a catalyst composition of the general formula, on an oxide basis,

$$(X)_b(M)_c(Z)_d(O)_e \qquad (I)$$

wherein

X represents at least one non-noble Group VIII metal;

M represents at least one non-noble Group VIb metal;

Z represents one or more elements selected from aluminium, silicon, magnesium, titanium, zirconium, boron and zinc;

O represents oxygen;

one of b and c is the integer 1;

and

d, e, and the other of b and c each are a number greater than 0 such that the molar ratio of b:c is in the range of from 0.5:1 to 5:1, the molar ratio of d:c is in the range of from 0.1:1 to 50:1, and the molar ratio of e:c is in the range of from 3.6:1 to 108:1;

which comprises heating a composition of the general formula

$$(NH_4)_a(X)_b(M)_c(Z)_d(O)_e \qquad (II)$$

in which a is a number greater than 0 and X, M, Z, O, b, c, d and e are as defined above, at a temperature in the range of from 100 to 600°C,

wherein the composition of general formula II is in the form of, or is recovered from, a slurry optionally after ageing at a temperature in the range of from 20 to 95°C for a minimum of 10 minutes, said slurry being obtained by (co)precipitating, at a temperature and for a time sufficient to produce the composition II, at least one non-noble Group VIII metal compound, at least one non-noble Group VIb metal compound, at least one refractory oxide material and an alkali compound, in a protic liquid, at least one of the metal compounds being partly in solid state and partly in dissolved state.

2. (Original) A process as claimed in claim 1, wherein said heating of the composition II is at a temperature not exceeding 350°C.

3. (Original) A process as claimed in claim 2, wherein the (co)precipitation is carried out at a temperature in the range of from 25 to 95°C, for a period of time in the range of from 10 minutes to 2 hours, at an alkali concentration of from 0.2 mol per mol of metals M+X, on an oxide basis, to 50 mol per mol of metals M+X, on an oxide basis, and with an initial slurry concentration in the range of from 2 to 40 wt% nominal solids content.

4. (Original) A process as claimed in claim 3, wherein the alkali compound is ammonia or a material that will generate ammonium ions in the protic liquid used.

5. (Original) A process as claimed in claim 4, wherein the alkali concentration is in the range of from 0.75 to 5 mol nitrogen per mol of metals M + X, on an oxide basis.

6. (Original) A process as claimed in claim 5, wherein the composition of the general formula I is further subjected to any one or more of the following process steps carried out in any appropriate order: cooling; optionally isolating; drying; shaping, preferably by extrusion using no extrusion aids; calcining; sulphiding.

7. (Original) A bulk metal oxide catalyst composition obtainable by a process as claimed in any one of claims 1 to 6.

8. (Currently Amended) A catalyst comprising a composition of the general formula, on an oxide basis,

$$(X)_b(M)_c(Z)_d(O)_e \qquad \text{(I)}$$

wherein

X represents at least one non-noble Group VIII metal;

M represents at least one non-noble Group VIb metal;

Z represents one or more elements selected from <u>the group consisting of</u> ~~aluminium~~ <u>aluminum</u>, silicon, magnesium, titanium, zirconium, boron and zinc;

O represents oxygen;

one of b and c is the integer 1;

and

d, e, and the other of b and c each are a number greater than 0 such that the molar ratio of b:c is in the range of from 0.5:1 to 5:1, the molar ratio of d:c is in the range of from 0.1:1 to 50:1, and the molar ratio of e:c is in the range of from 3.6:1 to 108:1;

which is prepared by a precipitation process, wherein a refractory oxide material in an amount in the range of from 15 to 40 wt%, on an oxide basis, is precipitated with at least one non-noble Group VIII compound and at least one non-noble Group VIb metal compound.

9. (Original) A catalyst as claimed in claim 8, wherein the metals X and M are one of nickel and molybdenum, nickel and tungsten, and nickel, molybdenum and tungsten.

10. (Original) A catalyst as claimed in claim 9, which is XRD-amorphous.

11. (Original) A catalyst as claimed in claim 10, which has an XRD diffraction pattern in which above 2θ=15°, there is a local maximum having a characteristic full width at a half maximum above 2.5° at each of a 2θ value in the range of from 25.5° to 28.0°; a 2θ value in the range of from 33.6° to 34.6°; and a 2θ value in the range of from 59.8° to 62.2°, and there is no reflection or local maximum having a characteristic full width at half maximum of 2.5° or below.

12. (Currently Amended) A catalyst as claimed in claim 11, wherein X is nickel, M is molybdenum, Z is silicon; the molar ratio of X:M is 1:1 and the refractory oxide material is precipitated with the metals compounds in an amount in the range of from 15 to 30 wt%~~, preferably to 25 wt%~~.

13. (Original) A process for the preparation of a composition, said process comprises heating a composition of the general formula

$$(NH_4)_a(X)_b(M)_c(Z)_d(O)_e \qquad \text{(II)}$$

in which a is a number greater than 0 and X, M, Z, O, b, c, d and e are as defined in claim 1, at a temperature in the range of from 100 to 600°C to yield said composition having the general formula, on an oxide basis,

$$(X)_b(M)_c(Z)_d(O)_e \qquad \text{(I)}$$

wherein

X represents at least one non-noble Group VIII metal;

M represents at least one non-noble Group VIb metal;

Z represents one or more elements selected from aluminium, silicon, magnesium, titanium, zirconium, boron and zinc;

O represents oxygen;

one of b and c is the integer 1;

and

d, e, and the other of b and c each are a number greater than 0 such that the molar ratio of b:c is in the range of from 0.5:1 to 5:1, the molar ratio of d:c is in the range of from 0.1:1 to 50:1, and the molar ratio of e:c is in the range of from 3.6:1 to 108:1.

14. (Original) A method of making a composition, said method comprises:

mixing a non-noble Group VIII metal compound, a non-noble Group VIB metal compound, a refractory oxide material and an alkali compound in a protic liquid to thereby form a mixture in which said mixture at least one of the metal compounds is partly in solid state and partly in dissolved state;

subjecting said mixture to coprecipitation conditions thereby forming a coprecipitate solid; and heating said coprecipitate solid at an elevated temperature so as to yield said composition.

15. (Original) A method as recited in claim 14, wherein said protic liquid comprises water, said non-noble Group VIB metal compound is either a molybdenum compound or a tungsten compound, said non-noble Group VIII metal compound is a nickel compound that suitably stays in the partly solid phase in said protic liquid, and said alkali compound is selected from the group consisting of hydroxides, silicates, and carbonates.

16. (Original) A method as recited in claim 15, wherein said coprecipitation conditions include maintaining said mixture at a coprecipitation temperature in the range of from 25 to 95 °C for a period of time in the range of from 10 minutes to 2 hours, and wherein said mixture includes an alkali concentration in the range of from 0.5 mol per mol of the non-noble Group VIII metal and non-noble Group VIB metal, on an oxide basis, to 50 mol per mol of the non-noble Group VIII metal and non-noble Group VIB metal, on an oxide basis.

17. (Original) A method as recited in claim 16, wherein said elevated temperature is in the range of from 100 °C to 600 °C.

18. (Original) A method as recited in claim 17, wherein said alkali compound is ammonia or a material that will generate ammonium ions in the protic liquid of said mixture.

19. (Original) A method as recited in claim 18, wherein said composition is of the general formula, on an oxide basis,

$$(X)_b(M)_c(Z)_d(O)_e \qquad \text{(I)}$$

wherein

X represents at least one non-noble Group VIII metal;

M represents at least one non-noble Group VIb metal;

Z represents one or more elements selected from aluminium, silicon, magnesium, titanium, zirconium, boron and zinc;

O represents oxygen;

one of b and c is the integer 1;

and

d, e, and the other of b and c each are a number greater than 0 such that the molar ratio of b:c is in the range of from 0.5:1 to 5:1, the molar ratio of d:c is in the range of from 0.1:1 to 50:1, and the molar ratio of e:c is in the range of from 3.6:1 to 108:1.

20. (Original) A method as recited in claim 19, wherein said composition is XRD-amorphous.

21. (Original) A method as recited in claim 20, wherein said composition has an XRD diffraction pattern in which above $2\theta=15°$, there is a local maximum having a characteristic full width at a half maximum above 2.5° at each of a 2θ value in the range of from 25.5° to 28.0°; a 2θ value in the range of from 33.6° to 34.6°; and a 2θ value in the range of from 59.8° to 62.2°, and there is no reflection or local maximum having a characteristic full width at half maximum of 2.5° or below.

22. (Original) A hydroprocessing method, comprising:

contacting under hydroprocessing conditions a hydrocarbon feed with a catalyst comprising a composition of the general formula, on an oxide basis,

$$(X)_b(M)_c(Z)_d(O)_e \qquad \text{(I)}$$

wherein

X represents at least one non-noble Group VIII metal;

M represents at least one non-noble Group VIb metal;

Z represents one or more elements selected from aluminium, silicon, magnesium, titanium, zirconium, boron and zinc;

O represents oxygen;

one of b and c is the integer 1;

and

d, e, and the other of b and c each are a number greater than 0 such that the molar ratio of b:c is in the range of from 0.5:1 to 5:1, the molar ratio of d:c is in the range of from 0.2:1 to 50:1, and the molar ratio of e:c is in the range of from 3.7:1 to 108:1.

23. (Original) A hydroprocessing method as recited in claim 22 wherein said composition is XRD-amorphous.

24. (Original) A hydroprocessing method as recited in claim 23 wherein said composition has an XRD diffraction pattern in which above $2\theta=15°$, there is a local maximum having a characteristic full width at a half maximum above 2.5° at each of a 2θ value in the range of from 25.5° to 28.0°; a 2θ value in the range of from 33.6° to 34.6°; and a 2θ value in the range of from 59.8° to 62.2°, and there is no reflection or local maximum having a characteristic full width at half maximum of 2.5° or below.

25. (Original) A composition made by the method of claim 14.

26. (Original) A method comprising:

contacting under hydroprocessing conditions a hydrocarbon feed with the composition made by the method of claim 14.